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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,897	04/26/2006	Tim Hsu	2484-050555	1978
28289 7590 01/07/2010 THE WEBB LAW FIRM, P.C. 700 KOPPERS BUILDING 436 SEVENTH AVENUE PITTSBURGH, PA 15219				
EXAMINER TOOMER, CEPHIA D				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
01/07/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/524,897

**Applicant(s)**

HSU ET AL.

**Examiner**

Cephia D. Toomer

**Art Unit**

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 October 2009.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-78 is/are pending in the application.  
4a) Of the above claim(s) 35-78 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-34 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SI/200)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Applicant's election with traverse of Group I, claims 1-34 in the reply filed on October 26, 2009 is acknowledged. The traversal is on the ground(s) that independent claims 1, 35, 43, 58, 77 and 78 have been amended to distinguish over the resin compositions disclosed in the U.S. Patents cited in the election/restriction and that the claims now possess a special technical feature that bind all pending claims together. This is not found persuasive because Applicant has already presented claims that show that there is a lack of unity of invention. The fact that Applicant has amended the claims in order to try to present claims that are of unity of invention is of no merit to the holding of the lack of unity. Unity of invention is based on claims filed in the international application and not the amendments made to the present claims.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Objections***

2. Claim 34 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Applicant's intended use does not limit the resin composition.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 15 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are rejected because the language "close to 1" is indefinite.

Clarification is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-6, 8, 13, 16-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohlhepp (US 5,401,799) in view of Haack (US 5,889,102).

Kohlhepp teaches a thermoplastic molding composition comprising from 20 to 70 % by wt of polyphenylene sulfide, (b) from 5 to 20 % by wt of polyethylene, (C ) from 10 to 40 % by weight of a fibrous reinforcing agent, (D) from 10 to 40% by wt of an inorganic filler, and (E) up to 1 wt % of a lubricant and/or other additives (see abstract).

The fibrous reinforcing materials are glass fibers or other heat-resistant inorganic or organic fiber materials (see col. 2, lines 21-25). The inorganic fillers are non-fibrous structures such as talc, kaolin, quartz, chalk and mica (see col. 2, lines 26-29).

Kohlhepp exemplifies pentaerythritol tetrastearate as the lubricant (see Table 1, footnote 5). Kohlhepp teaches the limitations of the claims other than the differences that are discussed below.

Kohlhepp fails to teach the addition of a polymeric lubricant such as PTFE (claims 1,22, 23, 32 and 33). However, Haack teaches fluoropolymers such as PTFE in molding compositions (see col. 1, lines 46-50).

It would have been obvious to one of ordinary skill in the art to include a polymeric lubricant such as PTFE because Haack teaches that it is a conventional lubricant for molding compositions and that it is an art recognized equivalent of pentaerythritol tetrastearate, which is taught by Kohlhepp as the lubricant of his invention.

Kohlhepp fails to teach that the lubricants are amides, fatty acid salts or waxes (claims 25, 27-30, 32 and 33) or that the filler is titanium dioxide (claim 32). However, Haack teaches these differences. Haack teaches that lubricants such as fatty acid esters, fatty acids, fatty acid monoamides, fatty acid diamides, metal soaps and polyethylene waxes are known to improve the sliding and abrasion behavior of plastics (see col. 1, lines 31-50). These generic compounds encompass the specific compounds of the present claims, absent evidence to the contrary. Haack teaches that the fillers taught by Kohlhepp (chalk, talc, mica, etc.) are equivalent to titanium dioxide (see col. 1, line 66 through col. 2, lines 1-3).

It would have been obvious to one of ordinary skill in the art to include the above lubricants because Haack teaches that these lubricants improve the sliding and abrasion behavior of the plastics and that they are art recognized equivalents to the lubricant taught by Kohlhepp.

It would have been obvious to one of ordinary skill in the art to use titanium dioxide as the filler because Haack teaches it is an art recognized equivalent to the fillers taught by Kohlhepp.

With respect to claims 13, 16, 17 and 31-33, since Kohlhepp teaches a similar molding composition it would be reasonable to expect that Kohlhepp would meet the limitations regarding the stability temperature, MI ratio and deflection temperature, absent evidence to the contrary.

7. Claims 7, 9-12, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohlhepp as applied to claims above, and further in view of Lahijani (US 6,013,719).

Kohlhepp has been discussed above. Kohlhepp fails to teach that the thermoplastic is PEEK, PEK, or PEKK. However, Lahijani teaches this difference.

Lahijani teaches that polyarylene ether ketones and polyphenylene sulfide are thermoplastics that are thermally stable at a temperature of at least 140 C. Lahijani teaches that polyarylene ether ketones (PEK, PEEK, and PEKK) provide the highest thermal stability of the thermoplastics (see col. 2, line 41 through col. 3, lines 1-40).

It would have been obvious to one of ordinary skill in the art to substitute a polyarylene ketone for the polyphenylene sulfide because Lahijani teaches that the ketones are more thermally stable than the sulfides and their use would improve the properties of the resin composition.

With respect to the MI, it would be reasonable to expect that the polyarylene ketones would possess the claimed MI since they are used for the same purpose as that of the present invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 571-272-1126. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cephia D. Toomer/  
Primary Examiner  
Art Unit 1797